

LEXSEE 772 F.2D 1570

RALSTON PURINA COMPANY, Appellee v. FAR-MAR-CO, INC., Appellant

No. 84-1237

UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

772 F.2d 1570; 1985 U.S. App. LEXIS 15275; 227 U.S.P.Q. (BNA) 177

September 19, 1985

PRIOR HISTORY: [**1]

Appealed from: U.S. District Court for the District of Kansas.

CASE SUMMARY:

PROCEDURAL POSTURE: Appellant sought review of a judgment from the United States District Court for the District of Kansas, in which the district court held that appellee's patent was valid and that appellant willfully infringed upon appellee's patent.

OVERVIEW: Appellee filed suit for patent infringement. The district court held that appellee's patent was valid and that appellant willfully infringed upon appellee's patent. Appellant challenged the decision. The court determined that the district court's finding of willful infringement was a question of fact and was not reversible upon appeal unless it was shown to be clearly erroneous. The court held that when a potential infringer had actual notice of another's patent rights, he had an affirmative duty to exercise due care to determine whether or not he was infringing. The evidence showed that appellant knew of its potential infringement liability to appellee. The court found willful infringement on appellant's part, based on appellant's response to appellee's offer of a license without consulting patent counsel.

OUTCOME: The court affirmed the district court's decision in part and held that certain claims of the patent were invalid, but reversed the decision in part, holding that certain claims were not invalid. The court affirmed the finding of willful infringement, finding that the district court's judgment was not clearly erroneous.

LexisNexis(R) Headnotes

Evidence > Procedural Considerations > Burdens of Proof > Initial Burden of Persuasion
Patent Law > Inequitable Conduct > Effect, Materiality & Scierter > General Overview
Patent Law > Infringement Actions > Defenses > Patent Invalidity > Validity Presumption

[HN1] A patent is presumed valid, and the burden of persuasion to the contrary is and remains on the party asserting invalidity. In addition, the party asserting invalidity also bears the initial procedural burden of going forward to establish a legally sufficient prima facie case of invalidity. If this burden is met, the party relying on validity is then obligated to come forward with evidence to the contrary. Before rendering its judgment, the court must determine whether all of the evidence establishes that the validity challenger so carried his burden as to have persuaded the decisionmaker that the patent can no longer be accepted as valid. A party asserting invalidity based on 35 U.S.C.S. § 112 bears no less a burden and no fewer responsibilities than any other patent challenger.

Criminal Law & Procedure > Appeals > Standards of Review > Clearly Erroneous Review > General Overview

Patent Law > Anticipation & Novelty > Fact & Law Issues

Patent Law > Jurisdiction & Review > Standards of Review > Clearly Erroneous Review

[HN2] In a patent suit, anticipation is a factual determination, reviewable under the "clearly erroneous" standard. A finding is "clearly erroneous" when although there is evidence to support it, the reviewing court on the entire evidence is left with the definite and firm conviction that a mistake has been committed.

Patent Law > Claims & Specifications > Description Requirement > General Overview

Patent Law > Claims & Specifications > Enablement Requirement > General Overview**Patent Law > Jurisdiction & Review > Standards of Review > General Overview**

[HN3] Whether the description requirement is met is a question of fact reviewable under the clearly erroneous standard. The test for sufficiency of support in a parent application is whether the disclosure of the application relied upon reasonably conveys to the artisan that the inventor had possession at that time of the later claimed subject matter.

Civil Procedure > Appeals > Standards of Review > Clearly Erroneous Review**Patent Law > Infringement Actions > Infringing Acts > General Overview****Patent Law > Jurisdiction & Review > Standards of Review > General Overview**

[HN4] A finding of willful infringement is a question of fact and is not reversible upon appeal unless shown to be clearly erroneous.

Patent Law > Infringement Actions > General Overview**Patent Law > Ownership > Conveyances > Licenses
Torts > Negligence > Duty > Affirmative Duty to Act > General Overview**

[HN5] When a potential infringer has actual notice of another's patent rights, he has an affirmative duty to exercise due care to determine whether or not he is infringing. Such an affirmative duty usually includes the duty to seek and obtain competent legal advice from counsel before the initiation of any possible infringing activity.

COUNSEL:

Warren N. Williams, Schmidt, Johnson, Hovey & Williams, of Kansas City, Missouri, argued for Appellant. With him on the brief was John M. Collins.

Randall G. Litton, Price, Heneveld, Huizenga & Cooper, of Grand Rapids, Michigan, argued for Appellee. With him on the brief was Richard C. Cooper.

JUDGES:

Baldwin and Bennett, Circuit Judges, and Miller, Senior Circuit Judge. n1 Miller, Senior Circuit Judge, dissenting in part and concurring in part.

n1 The Honorable Jack R. Miller assumed senior status effective June 6, 1985.

OPINIONBY:

BALDWIN

OPINION:

[*1572] BALDWIN, Circuit Judge.

The decision of the United States District Court for the District of Kansas, holding claims 1-52 of U.S. Patent No. 3,940,495 (Flier) not invalid, and holding claims 1, 2, 8-20, 22, 23, 25, and 29-33 willfully infringed, is affirmed-in-part and reversed-in-part.

Facts

The Flier invention is the first successful process, and resultant product, for directly and continuously restructuring oil seed particles, preferably soy particles, into a textured, chewable, fibrous, meat-like food product. Restructuring is accomplished [**2] by mechanically working defatted, moistened soy particles under elevated temperature and pressure, into a flowable, plastic mass which is expanded into the restructured, fibrous, meat-like food product by suddenly releasing the pressure. The original application was filed July 10, 1964. A continued-in-part application was filed December 9, 1966. A continuation application was filed January 17, 1973, from which the patent issued. Although the 1964 application is more properly called a grandparent application, it will be referred to as the parent for the purposes of this opinion.

[*1573] Interference 96,355, styled *Wilding v. Flier v. Atkinson*, was declared on May 23, 1968, involving the pending patent applications of Morris Wilding (assignor to Swift and Co.), Flier (assignor to Ralston Purina Co. (Ralston)) and William T. Atkinson (assignor to Archer-Daniels-Midland Co. (ADM)). Priority was eventually awarded to Flier on August 13, 1971. The interference was appealed, but settled by a cross-licensing arrangement on April 6, 1972. The settlement agreement provided that each party would grant to any third party making a written request a nonexclusive license under the [**3] claims of any existing or future patent.

On July 9, 1973, counsel for Flier specifically advised the examiner that an ADM patent application (the Dutch publication), No. 6506477, had been published on November 22, 1965, and that it corresponded generally to the Atkinson United States patent application which had been involved in the interference. The district court found specifically that this reference was brought to the examiner's attention after discovery in June, 1973, and that it was indeed a printed publication.

Claims which correspond to claims 8, 9, and 34-52 in Flier were allowed in an office action issued April 5, 1974. Additional claims were allowed in November 1, 1974. The remaining claims were allowed June 3, 1975.

Far-Mar-Co was licensed by ADM for the product described by the patent in suit. Upon issuance of Flier, Ralston offered a license to Far-Mar-Co, which was immediately declined. Ralston filed suit in district court for patent infringement approximately sixty days after Flier issued.

OPINION

The decisive issues in this case are:

1. Whether the trial court erred in deciding that Far-Mar-Co's burden of proof was to show by clear and convincing [**4] evidence that Flier was invalid.

2. Whether the trial court clearly erred in finding that the patent application of Archer Daniels Midland Company, No. 6506477 filed in the Patent Office of the Netherlands (Dutch publication) did not anticipate the claims of Flier.

3. Whether the trial court's finding that claims 10-13, 15-28, and 32 were descriptively supported by the parent application and thus entitled to the parent's 1964 filing date is clearly erroneous.

4. Whether the trial court's finding of willful infringement was clearly erroneous.

Burden of Proof

Far-Mar-Co contends that the district court erroneously imposed upon it the burden of proving insufficient disclosure in the parent application; also, that Ralston, as the party asserting adequate disclosure, should have borne the burden of demonstrating that adequate legal support exists. Ralston, on the other hand, argues that the district court correctly placed the burden of overcoming the presumption of validity by demonstrating insufficiency of disclosure on Far-Mar-Co, and found that Far-Mar-Co had not shown by clear and convincing evidence that it had met that burden.

Far-Mar-Co incorrectly treats [**5] the burden of establishing a *prima facie* case of insufficiency of disclosure as if it bears no relationship to the burden of overcoming the presumption of validity accorded a patent under 35 U.S.C. § 282. [HN1] A patent is presumed valid, and the burden of persuasion to the contrary is and remains on the party asserting invalidity. *W. L. Gore & Assoc., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1553, 220 U.S.P.Q. (BNA) 303, 313 (Fed. Cir. 1983), cert. denied, 469 U.S. 851, 105 S. Ct. 172, 83 L. Ed. 2d 107 (1984). In addition, the party asserting invalidity also bears the ini-

tial procedural burden of going forward to establish a legally sufficient *prima facie* case of invalidity. If this burden is met, the party relying on validity is then obligated to come forward with evidence to the contrary. Before rendering its judgment, the court must determine whether "all of the evidence establishes that the validity challenger so carried his burden as to have persuaded the decisionmaker that the patent can no longer be accepted as valid. [**6] " [*1574] *Lear Siegler, Inc. v. Aeroquip Corp.*, 733 F.2d 881, 885, 221 U.S.P.Q. (BNA) 1025, 1028 (Fed. Cir. 1984). A party asserting invalidity based on 35 U.S.C. § 112 bears no less a burden and no fewer responsibilities than any other patent challenger. Far-Mar-Co's burden of proof before the district court was to show by clear and convincing evidence that Flier was invalid. See, e.g., *Pennwalt Corp. v. Akzona, Inc.*, 740 F.2d 1573, 1578, 222 U.S.P.Q. (BNA) 833, 836 (Fed. Cir. 1984). The district court recognized and enunciated these rules. Accordingly, we hold that it did not place an impermissible burden upon Far-Mar-Co. n2 The question of whether disclosure satisfies the written description requirement of § 112 is based on questions of fact. See *In re Wilder*, 736 F.2d 1516, 1520, 222 U.S.P.Q. (BNA) 369, 372 (Fed. Cir. 1984), cert. denied, 469 U.S. 1209, 105 S. Ct. 1173, 84 L. Ed. 2d 323 (1985). Far-Mar-Co thus bears the burden of demonstrating that the court erred in its application of the law to the facts, see *Bose Corp. v. Consumers Union*, 466 U.S. 485, 104 S. Ct. 1949, 80 L. Ed. 2d 502 (1984), [**7] or that its findings of fact were clearly erroneous.

n2 Far-Mar-Co's reliance on *Wagoner v. Barger*, 59 C.C.P.A. 1213, 463 F.2d 1377, 175 U.S.P.Q. (BNA) 85 (CCPA 1972), explains the vehemency with which it contends that the district court erred in assigning the burden of proof. *Wagoner* involved an interference in which the senior party owned the patent whose claims were copied to provoke the interference. With respect to the burden of proof on the issue of inherency, the court stated that "clearly, the burden of proving that language contained in the claims of the later application [which, in this case, were allowed to issue] is on the party asserting the equivalency . . . and the burden is a heavy one." 463 F.2d at 1380, 175 U.S.P.Q. at 86-87. The distinguishing feature between *Wagoner* and the present case is that *Wagoner* was an *interference*. Although the *test* for the adequacy of disclosure is the same, whether or not the proceedings are *ex parte* or *inter partes* before the Patent and Trademark Office, or before a district court, the burdens are allocated somewhat differently in each, due to their distinctive characteristics. The

objective of an interference, unlike that in a district court when invalidity is alleged, is to determine priority of invention. After being accorded senior or junior party status, with the concomitant procedural benefits (senior party) or burdens (junior party), *each* party is responsible for establishing its case for sufficiency of disclosure in a prior application if it attempts to antedate a reference under § § 112 and 120 or 119. Hence, the rule enunciated in *Wagoner*, 463 F.2d at 1380.

[**8]

Anticipation

[HN2] Anticipation is a factual determination, reviewable under the "clearly erroneous" standard. *Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 1458, 221 U.S.P.Q. (BNA) 481, 485 (Fed. Cir. 1984). A finding is "clearly erroneous" when although there is evidence to support it, the reviewing court on the entire evidence is left with the definite and firm conviction that a mistake has been committed. *United States v. U.S. Gypsum Co.*, 333 U.S. 364, 395, 76 U.S.P.Q. (BNA) 430, 444, 92 L. Ed. 746, 68 S. Ct. 525 (1948); *SSIH Equipment S.A. v. USITC*, 718 F.2d 365, 381, 218 U.S.P.Q. (BNA) 678, 692 (Fed. Cir. 1983). Anticipation requires that "all limitations of the claim are found in the reference, or 'fully met' by it." *Kalman v. Kimberly-Clark Corp.*, 713 F.2d 760, 772, 218 U.S.P.Q. (BNA) 781, 789 (Fed. Cir. 1983).

Ralston contends, and the trial court found, that the Dutch publication was deficient because it failed to disclose (1) the importance of a "minor amount of fat" present [**9] during extrusion; (2) a definition for the word "plexilamellar" which was used to describe the product; and (3) the desirability of "separate zones of confinement or orifices" in the machinery used to mix and extrude the product. These findings are clearly erroneous.

The first finding is clearly erroneous because the Dutch publication specifies the same starting material claimed in Flier, and the trade defines the starting material as having low levels of fat. The publication is therefore not deficient as to this element of Flier's claims.

The second finding, that the Dutch publication does not define "plexilamellar" is unsupportable in view of the following passage from page 2 of that publication:

The protein extrudate obtained according to the above mentioned method is a rough, resilient, dry to slightly moist to [*1575] the touch, open celled foamy mass made up of interlaced interconnected strips of varying width and thickness which may appear fibrous or skin-

like. The majority of the cells formed by this *plexilamellar* protein structure are. . .
[Emphasis added.]

The third finding is similar to the first, and fails for a similar reason. The Dutch [**10] publication discloses the use of a standard extruder which, at the time, came equipped with the structure specified in the Flier patent. The publication is therefore not deficient as to this element of Flier's claims.

As a result of our disposition of this issue, only those claims entitled to the effective filing date, July 10, 1964, of the parent application remain in issue. The trial court held and Ralston does not contest, that claims 1-9, 14, 29-31, and 33-52 were entitled only to the effective filing date of the 1966 application. Thus, we hold these claims to be invalid for having been described in a printed publication before the invention thereof by the applicant for patent. 35 U.S.C. § 102(a).

Description Requirement

The trial court held that claims 10-13, 15-28, and 32 of Flier are entitled to the effective filing date of the 1964 parent application because the parent application complies with the written description requirement of 35 U.S.C. § 112, first paragraph, which is incorporated in 35 U.S.C. § 120. [**11] [HN3] Whether the description requirement is met is a question of fact reviewable under the clearly erroneous standard. *In re Wilder*, 736 F.2d 1516, 1520, 222 U.S.P.Q. (BNA) 369, 372 (Fed. Cir. 1984), cert. denied, 469 U.S. 1209, 105 S. Ct. 1173, 84 L. Ed. 2d 323 (1985). The trial court properly recognized that the test for sufficiency of support in a parent application is whether the disclosure of the application relied upon "reasonably conveys to the artisan that the inventor had possession at that time of the later claimed subject matter." *In re Kaslow*, 707 F.2d 1366, 1375, 217 U.S.P.Q. (BNA) 1089, 1096 (Fed. Cir. 1983). Precisely how close the original description must come to comply with the description requirement of 35 U.S.C. § 112 must be determined on a case-by-case basis. *In re Wilder*, 736 F.2d 1516, 1520, 222 U.S.P.Q. (BNA) 369, 372 (Fed. Cir. 1984).

Far-Mar-Co cites several range cases to support its argument that ranges found in the applicant's claim language must correspond exactly to ranges disclosed in the parent. These cases are not in point. The facts in these cases precluded [**12] a determination that one skilled in the art could derive the claim limitations from the parent, due to a number of different factors, e.g., the unpredictable nature of the art, *In re Sichert*, 566 F.2d 1154, 196 U.S.P.Q. (BNA) 209 (CCPA 1977); failure to distinguish one process from another, *In re MacLean*, 59

C.C.P.A. 799, 454 F.2d 756, 172 U.S.P.Q. (BNA) 494 (CCPA 1972); the addition of a critical limitation, *In re Blaser, 556 F.2d 534, 194 U.S.P.Q. (BNA) 122 (CCPA 1977)*; failure to define a critical term, *In re Lukach, 58 C.C.P.A. 1233, 442 F.2d 967, 169 U.S.P.Q. (BNA) 795 (CCPA 1971)*; and use of a list that did not contain the claimed substance. *In re Ahlbrecht, 58 C.C.P.A. 848, 435 F.2d 908, 168 U.S.P.Q. (BNA) 293 (CCPA 1971)*. In addition, a predecessor to this court has held "that a claim may be broader than the specific embodiment disclosed in a specification is in itself of no moment." *In re Rasmussen, 650 F.2d 1212, 1215, 211 U.S.P.Q. (BNA) 323, 326 (CCPA 1981)*. Far-Mar-Co argues that the claims remaining in issue contain new matter at least with respect to the protein [**13] content of the starting material, total and added moisture, temperature ranges, and the situs of fiber formation. Far-Mar-Co contends that although the 1964 parent application would enable one skilled in the art to practice the invention claimed, it does not meet the description requirement under 35 U.S.C. § 112.

With respect to protein content, Far-Mar-Co argues that the claim language "protein content of at least about that of solvent extracted soybean meal" is not supported by the language of the parent application, which speaks of "soybean meal having a low fat and high protein content." The parent application also states that "such 50% protein soybean meal is well known and frequently is a by-product of the process of oil extraction from soybeans. Such meal is preferably solvent extracted to decrease [1576] the fat content thereof to the range mentioned above." Further, "soybean meal having a protein content of approximately 50% is the preferred meal component for use in the present invention. When, however, the meal has a protein content of substantially less than 50%, it may be mixed with a high protein component which will increase the protein [**14] content of the combination to the preferred 50%."

The trial court found that the parent disclosure does support the claim language, based on the 1964 disclosure and on consideration of the knowledge possessed by those skilled in the art of extrusion of both farinaceous and proteinaceous vegetable materials in 1964. The trial court found that soybean meal of 44%, 50%, 70%, and 90% protein were standard, available commodities in 1964. The trial court also found that the parent, which disclosed a "high protein content" and a preferred lower level but no upper limit, and indicated that protein content could be adjusted, reasonably conveyed adjustment of the protein content of soybean meal to levels above 50%. Having considered Far-Mar-Co's arguments, we conclude that the court did not clearly err in determining that the parent's disclosure adequately supports the protein content of the claims in issue.

With respect to temperature, Far-Mar-Co argues that the claim limitation "in excess of 212 degree F" and "substantially above 212 degree F" are not supported by the parent application. The trial court found that experts from both parties were in substantial agreement that the parent [**15] application sets the critical lower limit for temperature at 212 degree F and supports this limit in the patent claims. The trial court considered evidence of what the skilled artisan would appreciate about the sources of heat in the process, both steam heat and the pressure brought to bear on the mixture, as well as the limitations of the equipment disclosed. The trial court also noted that Far-Mar-Co's expert agreed that the claim language calling for the temperature "being increased substantially" found support in the parent application. On the basis of this record, it was not clear error for the court to find sufficient disclosure in the parent application for the above-mentioned limitations.

Far-Mar-Co argues that the trial court clearly erred in finding support in the parent for the moisture content limitations. The trial court considered (1) evidence that the purpose of moisture in the mix was to make the material flow through the extruder; (2) the physical characteristics of mixtures with varying levels of water; (3) the type of test and degree of accuracy in testing for moisture level; and (4) the approximate amount of moisture known by those skilled in the art to be [**16] contained in soybean meal. Based on this evidence and the formulations disclosed in the parent application, the court allowed both parties to calculate approximate upper and lower moisture limits supportable by the parent application. It found inadequate descriptive support in the parent application for the moisture limitations of "at least about 20%" and of those claims calling for a total moisture content "between about 20% and 40% by weight," and the parties do not contest these findings. The court found adequate support for moisture levels of "at least about 25% by weight," "at least 25% by weight," and "in the range of 20-30% of the resulting mixture." The trial court noted that claims simply calling for sufficient water to permit the resulting mixture to be passed through an extruder or calling for approximately 25% of the mixture were not challenged. The trial court's rationale for striking down the claims with endpoints of 20% and 40% was that these limits could not be justified solely by the so-called ball test for moisture content. Those claims would convey new information to one skilled in the art. The open-ended claims, however, would be limited by what a person skilled [**17] in the art would understand to be workable. After careful consideration of Far-Mar-Co's arguments, we conclude that the court did not clearly err in determining that the parent's disclosure adequately supported the water ranges of "at least about 25% by weight," and "at least 25% by weight." The court, however, did clearly err in finding support in the parent for

the limitation: "in the range of [*1577] 20%-30% of the resulting mixture" contained in claims 19, 27, and 28. We hold these claims are entitled only to the effective filing date of the 1966 application and are therefore invalid for having been anticipated by the Dutch publication.

Far-Mar-Co's argument that the parent application requires fiber formation inside the extruder is adequately disposed of by the trial court's opinion.

In sum we conclude that claims 10-13, 15-18, 20-26, and 32 of the Flier patent are entitled to the effective filing date of the 1964 parent application because the parent application adequately supports those claims for purposes of 35 U.S.C. § 120.

Willful Infringement

[**18] [HN4] A finding of willful infringement is a question of fact and is not reversible upon appeal unless shown to be clearly erroneous. *Underwater Devices, Inc. v. Morrison-Knudsen Co.*, 717 F.2d 1380, 1389, 219 U.S.P.Q. (BNA) 569, 576 (Fed. Cir. 1983). Far-Mar-Co has failed to persuade us that the district court's finding is clearly erroneous.

The trial court found willful infringement based on Far-Mar-Co's "conduct after issuance of the patent, particularly the decision to respond to plaintiff's offer of a license without consulting patent counsel." [HN5] When a potential infringer has actual notice of another's patent rights, he has an affirmative duty to exercise due care to determine whether or not he is infringing. *Underwater Devices, Inc. v. Morrison-Knudsen Co.*, 717 F.2d at 1389-90, 219 U.S.P.Q. at 576. Such an affirmative duty usually includes, inter alia, the duty to seek and obtain competent legal advice from counsel before the initiation of any possible infringing activity. *Id.* See also, *King Instrument Corp. v. Otari Corp.*, 767 F.2d 853, 226 U.S.P.Q. (BNA) 402, 412 (1985). [**19] The offering of a license is actual notice. *Leinoff v. Louis Milona & Sons, Inc.*, 726 F.2d 734, 743, 220 U.S.P.Q. (BNA) 845, 851 (Fed. Cir. 1984).

Far-Mar-Co's argument that it did not infringe willfully because Ralston withdrew its offer too quickly is unpersuasive. There is evidence of record that Far-Mar-Co has known of its potential infringement liability to Ralston since 1970. At that time, Ralston was involved in an interference proceeding with other parties, one of whom was Far-Mar-Co's licensor. Far-Mar-Co received notice that Ralston won the interference in April, 1972. After the Ralston patent issued in 1976, Far-Mar-Co rejected a license offer without even consulting its own in-house patent counsel. Far-Mar-Co cites no precedent for a decision that an infringer must be allowed a certain amount of time to "develop" willfulness, and we will not

supply it. On the basis of this record, we cannot say the court clearly erred in its finding.

Accordingly, we agree with the district court's decision that claims 10-13, 15-18, 20-26, and 32 of the Flier patent have not been shown to be invalid. We affirm the holding of infringement of claims 10-13, 15-18, 20, [**20] 22, 23, and 32. We hold claims 1-9, 14, 19, 27-31, and 33-52 to be invalid. Finally, we affirm the finding of willful infringement.

AFFIRMED-IN-PART AND REVERSED-IN-PART.

CONCURBY:

MILLER, (In Part)

DISSENTBY:

MILLER, (In Part)

DISSENT:

MILLER, Senior Circuit Judge, dissenting in part and concurring in part.

I cannot agree with the section in the majority opinion concerning the "written description" requirements of 35 U.S.C. § 112, first paragraph with respect to claims 10-13, 15-28, and 32.

It is necessary that Flier be entitled to its grandparent application's filing date under 35 U.S.C. § 120 if it is to avoid the invalidating effect of the ADM anticipating reference under 35 U.S.C. § 102(a). To be entitled to the benefit of the date of a previously filed copending application under section 120, such application must contain a written description of the invention claimed, and of the manner and process of making and using it, as set forth in the later application to comply with the first paragraph of section 112.

The invention claimed in the later application does not have to be described in the [*1578] [**21] prior application *in ipso verbi* in order to satisfy the description requirement of section 112. *Martin v. Johnson*, 59 C.C.P.A. 769, 454 F.2d 746, 751, 172 U.S.P.Q. (BNA) 391, 395 (CCPA 1972); see *Case v. CPC International, Inc.*, 730 F.2d 745, 751, 221 U.S.P.Q. (BNA) 196, 201 (Fed. Cir.), cert. denied, 469 U.S. 872, 105 S. Ct. 223, 224 U.S.P.Q. (BNA) 736, 83 L. Ed. 2d 152 (1984). However, claims with no explicit disclosure must find inherent support in the prior application, *Pingree v. Hull*, 518 F.2d 624, 186 U.S.P.Q. (BNA) 248 (CCPA 1975); and one skilled in the art, following the teaching of the prior application must be able to produce the subject matter of the later claims. *In re Magerlein*, 52 C.C.P.A. 1637, 346 F.2d 609, 612, 145 U.S.P.Q. (BNA) 683, 685 (CCPA

1965); *In re Nathan*, 51 C.C.P.A. 1059, 328 F.2d 1005, 1008-09, 140 U.S.P.Q. (BNA) 601, 604 (CCPA 1964). Thus, the test for determining whether the disclosure complies with the written description of the invention requirement is whether it would have reasonably conveyed to one of ordinary skill that the inventor [**22] invented the later-claimed subject matter. *In re Kaslow*, 707 F.2d 1366, 1375, 217 U.S.P.Q. (BNA) 1089, 1096 (Fed. Cir. 1983). The "legal" equivalent of the claim language is thus the "necessary and only reasonable construction" to be given the disclosure in the parent application by one skilled in the art. *In re Filstrup*, 45 C.C.P.A. 783, 251 F.2d 850, 853, 116 U.S.P.Q. (BNA) 440, 442 (CCPA 1958). The result claimed must "inevitably occur." See *Kooi v. DeWitt*, 546 F.2d 403, 409, 192 U.S.P.Q. (BNA) 268, 273 (CCPA 1976); *Pingree*, 518 F.2d at 627, 186 U.S.P.Q. at 251.

Section 112 does not refer to a mere "support" standard. In *In re Smith*, 59 C.C.P.A. 1025, 458 F.2d 1389, 1394, 173 U.S.P.Q. (BNA) 679, 683 (CCPA 1972), the court stated that "the recent cases suggests [sic] a more stringent requirement for a description of the claimed invention than may have been previously applied in cases wherein the issue was framed in terms of 'support' for claimed subject matter." The original disclosure may not be relied upon unless it "constitute[s] a full, clear, concise and exact description [**23] . . . of the invention claimed" in the patent to one of ordinary skill. *In re Wertheim*, 646 F.2d 527, 538-39, 209 U.S.P.Q. (BNA) 554, 565 (CCPA 1981) ("*Wertheim II*").

The test of adequacy of disclosure is neither anticipation (e.g., *In re Scheiber*, 587 F.2d 59, 199 U.S.P.Q. (BNA) 782 (CCPA 1978)) nor obviousness (see, e.g., *In re Piasecki*, 745 F.2d 1468, 1473, 223 U.S.P.Q. (BNA) 785, 789 (Fed. Cir. 1984)). Thus, it is not proper under section 112 to require that a person of ordinary skill determine by "extrapolation, interpolation and assumptions" (*Ex parte Eggleston*, 159 U.S.P.Q. (BNA) 692, 693 (PTO Bd. App. 1967)) that disclosure in the prior application would achieve a product possessing characteristics of, or operating within the ranges of numerical values set forth in, the later claimed subject matter. *In re Wertheim*, 541 F.2d 257, 191 U.S.P.Q. (BNA) 90 (CCPA 1976) ("*Wertheim I*"), later appealed, 646 F.2d 527, 209 U.S.P.Q. (BNA) 554 (CCPA 1981).

To carry its burden of demonstrating insufficient disclosure, Far-Mar-Co must show that the grandparent application [**24] would not have taught persons skilled in the art that the ranges of each item claimed in the patent claims were Flier's invention. n1

n1 The sufficiency of Far-Mar-Co's *prima facie* case is not at issue, since the district court

evidently considered all of the evidence produced by both parties.

With respect to protein content of the soybean meal, Far-Mar-Co asserts that the requirements in the Flier patent claims for "vegetable material having a protein content of at least about that of solvent-extracted soybean meal" (claims 15-17 and 32) and for "solvent-extracted soybean material having a protein content at least about that of solvent-extracted soybean meal" (claims 18-26) are not inherent in the grandparent specification, since each claim limitation is an open-ended range of up to 100% protein.

The grandparent contains the following references to soybean meal protein:

It has been found that soybean meal having a low fat and *high protein content* may be treated to form the desirable products [**25] of the present invention. Preferably the soybean meal has a fat content as low as 0.5% and a *protein content* [*1579] of approximately 50%. Such 50% protein soybean meal is well known and frequently is a by-product of the process of oil extraction from soybeans. . .

....
Example 1 As a specific example, 17 pounds of 50% soybean meal having a protein content of 50%, a fat content of. . .

Example 2

....
Soybean meal having a protein content of approximately 50% is the preferred meal component for use in practicing the present invention. When, however, the meal has a protein content of substantially less than 50%, it may be mixed with a high protein component which will increase the protein content of the combination to the preferred 50%.

(Emphasis supplied.) The district court noted that most of the references to protein concentrations in the grandparent application emphasize the importance of "approximately" 50% protein soybean meal. It also found that in Example 2 the grandparent indicates that soybean

meal lacking sufficient protein concentration may be altered to produce the preferred percentage.

The court also [**26] referred to the Soybean Blue Book for 1964 and the Yearbook and Trading Rules for 1964-1965, in which it found reflected the knowledge in the art that the protein content of 50% solvent-extracted soybean meal was "minimum 50%" and that 44% soybean meal was also available. The court also noted that soybean protein concentrate and soybean protein isolate (not soybean meal as the majority opinion suggests), with protein concentrations over 50%, were "well known" in the art in 1964.

I am persuaded that the district court erred when it found from these references (in combination with the grandparent specification disclosure of "about 50%" and "approximately 50%" protein) that "it is doubtful that a person skilled in the art would . . . have construed from the parents [sic] disclosure a maximum protein limit of about 50%." (Finding 139.) By assuming that those of ordinary skill in 1964 would have had additional reference materials for use in creating limitations in the grandparent specification, the court erroneously applied an obviousness analysis, transgressing this court's declaration in *Piasecki*, 745 F.2d at 1473, 223 U.S.P.Q. at 789, and *In re Shetty*, 566 F.2d 81, 86, 195 U.S.P.Q. (BNA) 753, 756 (CCPA 1977), [**27] *reh'g denied* (Jan. 19, 1978), that the specification itself must be the source of its interpretation (with respect to scope) for one of ordinary skill. *In re Ruschig*, 54 C.C.P.A. 1551, 379 F.2d 990, 995-96, 154 U.S.P.Q. (BNA) 118, 123 (CCPA 1967).

The district court also found that "adjustment of the protein content of soybean meal to a level above 50% is reasonably conveyed where the disclosure set forth a requirement of a 'high protein content,' disclosed the preferred level but no upper limit. . . ." By taking this language out of context, the court erred in its interpretation of the specification. The language should have been read *in pari materia* with the sentence that follows it, which clearly indicates that Flier equated "high protein content" with "approximately 50%." I disagree with the gloss imposed on the language of the grandparent application by the majority opinion. The *patent* claim language is not the only "necessary and reasonable" construction of the language in the grandparent application (*In re Filstrup*, 251 F.2d at 853, 116 U.S.P.Q. at 442), and a "level above 50%" is not the "inevitable" interpretation of [**28] "about," "approximately," or even "preferably" 50%. *Cf. Kropa v. Robie*, 38 C.C.P.A. 858, 187 F.2d 150, 154-55, 88 U.S.P.Q. (BNA) 478, 483 (CCPA 1951).

The district court conceded that the "open-ended range of from about 50% to 100%" is "in part predicated on the assumption that solvent-extracted soybean meal

contains about 50% protein." If this means, as the majority asserts, that the district court found that the grandparent application discloses a "preferred lower limit," such finding is clearly erroneous. The grandparent application does state that 50% protein meal was the preferred concentration. However, in view of the language in the grandparent application expressing [*1580] Flier's knowledge that "substantially less than 50%" protein was a class of protein concentrations known to him at that time (which concentrations were readily raised to the preferred 50%), I cannot agree that the grandparent taught 50% protein concentration as a "preferred lower limit." Rather, if "preferred" is to be interpreted as a limitation, the more reasonable construction in this case would be as an upper limit. I conclude that the district court erred in finding that [**29] the Flier patent claims containing limitations on protein content of soybean meal were sufficiently disclosed in the 1964 grandparent application.

With respect to moisture content, Far-Mar-Co contends that the district court erred in concluding that the Flier claims limitations were sufficiently disclosed in the grandparent application. The 1964 grandparent recites, in the examples, 17 pounds of soybean meal "mixed with 2600 cc. of water" or 2850 cc. (It is undisputed that 2600 and 2850 cc. are 25 and 27% by weight, respectively, of the mixtures recited in the examples.) The claims limitations refer to "at least about 25% by weight" (claims 10-13) and "at least 25% by weight" (claims 15-17, 32).

These findings by the district court suffer from the same infirmities as do those with respect to protein concentration. Although written disclosure cases must be determined on a case-by-case basis (e.g., *In re Driscoll*, 562 F.2d 1245, 1250, 195 U.S.P.Q. (BNA) 434, 438 (CCPA 1977)) *Wertheim I, supra*, opposes extending, without limitation, the range of the only examples stated in the prior application in a situation similar to the present claims 10-13, 15-17, and [**30] 32. *See In re Ahlbrecht*, 58 C.C.P.A. 848, 435 F.2d 908, 168 U.S.P.Q. (BNA) 293 (CCPA 1971); *Smith*, 458 F.2d at 1394-95, 173 U.S.P.Q. at 683 (disclosure of genus and one species not sufficient description of intermediate subgenus). Certainly, genera and subgenera ranges which substantially deviate from the two species disclosed in the grandparent are not sufficiently described when there is no suggestion to those skilled in the art that such ranges of moisture are embraced by the original invention.

In reaching its conclusions, the district court relied on (1) "the practice" at Ralston in 1964, (2) "squeeze test," and (3) knowledge of those skilled in the art of the moisture content of soybean meal. It should be pointed out that "the practice" at Ralston in 1964 does not even appear to be within the knowledge of one of ordinary

skill, and neither a "squeeze test" nor the importance of the moisture content of soybean meal is suggested in the grandparent application. Cf. *In re Salmon*, 705 F.2d 1579, 1581, 217 U.S.P.Q. (BNA) 981, 983 (Fed. Cir. 1983); *Wertheim I*, 541 F.2d at 267-68, 191 U.S.P.Q. at 101. I am [**31] persuaded that the district court's findings on moisture content limitations are clearly erroneous.

Far-Mar-Co also contests the findings of the district court on the issue of the range of processing temperatures. The 1964 application recites a range of 212-360 degrees F in one example and states elsewhere that the mixture "must be subjected to heat . . . during the extrusion process." The Flier patent claims recite "in excess of 212 degrees F" (claim 10) and "substantially above 212 degrees F" (claims 11-13, 15-16, 28, and 32). These findings of the court are subject to the same criticism as are those relating to moisture content. The reasoning in *Wertheim I*, *Ahlbrecht*, and *Smith* applies to the limitations in claims 10, 15-16, 28, and 32. "Into the range of 212-310 degrees F" (claim 27) requires further discussion, because this range is totally within the range explicitly disclosed in the grandparent.

The court in *Wertheim II* held that the disclosure in the parent of 25% to 60% solids content, without more, did not satisfy the description requirement of the later claimed 35% to 60% solids concentration, because the claimed range was a significant restriction on [**32] the invention. 646 F.2d at 538, 209 U.S.P.Q. at 565. Analogous is claim 27, in which Ralston attempts to rely upon the grandparent's disclosure of 212-380 degrees F. Although it is likely, as the district court states, that "the skilled artisan would observe a practical upper limit of avoiding burning or scorching material passing through

the extruder" (Finding 151), the ADM reference indicates that extrusion temperatures of 450 degrees F were feasible in [*1581] 1965. Without any suggestion in the grandparent that temperatures above 310 degrees F would damage the product, there is no "inevitable" or "necessary and only reasonable construction" of the grandparent's disclosure as having the upper limit of 310 degrees F in claim 27. Cf. *In re Salmon*, 705 F.2d at 1581, 217 U.S.P.Q. at 983.

Finally, on the issue of situs of fiber formation (claims 10-13, 15-28, and 32), I concur with the majority opinion that Far-Mar-Co has not demonstrated that the district court clearly erred. Although Flier did not know in 1964 where fiber formation occurred, I am persuaded that one of ordinary skill in the art would have been taught by the grandparent disclosure [**33] how the invention was practiced. See *Spero v. Ringold*, 54 C.C.P.A. 1407, 377 F.2d 652, 656, 153 U.S.P.Q. (BNA) 726, 728-29 (CCPA 1967); *In re Magerlein*, 346 F.2d at 611-12, 145 U.S.P.Q. at 685. The invention "may well [have been] disclosed without positive identification." *Petisi v. Rennhard*, 53 C.C.P.A. 1452, 363 F.2d 903, 907, 150 U.S.P.Q. (BNA) 669, 672 (CCPA 1966); see *Foss v. Oglesby*, 29 C.C.P.A. 1005, 127 F.2d 312, 317, 53 U.S.P.Q. (BNA) 356, 361 (CCPA 1942).

In view of the foregoing, Ralston cannot rely on Flier's 1964 grandparent application for priority under sections 112 and 120 for claims 10-13, 15-28, and 32. Thus, these claims are rendered invalid by the ADM anticipating reference.

I do not join the majority on the issue of willfulness because it is rendered moot in light of my dissent.

LEXSEE 202 USPQ 655

IN THE MATTER OF THE APPLICATION OF ALLEN G. EICKMEYER

Appeal No. 79-525

UNITED STATES COURT OF CUSTOMS AND PATENT APPEALS

602 F.2d 974; 1979 CCPA LEXIS 224; 202 U.S.P.Q. (BNA) 655

July 19, 1979

PRIOR HISTORY: [**1]

Serial No. 124,413.

claiming the same invention as the patent reference, appellant did not lose statutory protection.

CASE SUMMARY:**LexisNexis(R) Headnotes**

PROCEDURAL POSTURE: Appellant sought review of the decision of the Patent and Trademark Office Board of Appeals, rejecting appellant's patent claims upon determination that appellant's 37 C.F.R. § 1.131 affidavit to antedate the reference's filing date was inapplicable, since appellant and the reference were claiming substantially the same invention.

OVERVIEW: In response to rejection by the U.S. Patent and Trademark Office of appellant's claims, appellant submitted an affidavit under 37 C.F.R. § 1.131 (Rule 131) to antedate the filing date of a reference. The examiner determined that the Rule 131 affidavit was inapplicable to antedate the reference, since both appellant and the reference claimed substantially the same invention. The court held that if appellant's Rule 131 affidavit demonstrated that appellant's date of invention was earlier than the effective date of the reference, the reference would be eliminated as support for the rejection. The court determined that since the Rule 131 affidavit was designed to protect the statutory rights of inventors, the language used in 37 C.F.R. § 1.131 was construed favorably to appellant unless appellant clearly claimed the same invention as the reference. Appellant successfully argued that the reference did not claim appellant's invention since the reference did not contain a temperature limitation. Accordingly, the court concluded that the reference's effective date was to be antedated.

OUTCOME: The court reversed, holding that because affidavit practice was designed to aid inventors protect their rights, the Rule 131 language should be construed favorably to appellant. Since appellant was not clearly

Patent Law > Date of Invention & Priority > General Overview

Patent Law > Jurisdiction & Review > Subject Matter Jurisdiction > Appeals

Patent Law > U.S. Patent & Trademark Office Proceedings > Examinations > General Overview

[HN1] The purpose of filing a 37 C.F.R. § 1.131 affidavit is to overcome the effective date of a reference cited in support of a rejection.

Patent Law > Date of Invention & Priority > General Overview

Patent Law > Jurisdiction & Review > Subject Matter Jurisdiction > Appeals

[HN2] If the 37 C.F.R. § 1.131 affidavit demonstrates that the applicant's date of invention is earlier than the effective date of the reference, the reference is eliminated as support for the rejection.

Patent Law > Date of Invention & Priority > General Overview

Patent Law > Jurisdiction & Review > Subject Matter Jurisdiction > Appeals

[HN3] The purpose of filing a 37 C.F.R. § 1.131 affidavit is not to demonstrate prior invention, but merely to antedate the effective date of the reference.

Patent Law > Date of Invention & Priority > General Overview

Patent Law > Jurisdiction & Review > Subject Matter Jurisdiction > Appeals***Patent Law > U.S. Patent & Trademark Office Proceedings > Interferences > General Overview***

[HN4] Although the test for sufficiency of an affidavit under 37 C.F.R. § 1.131(b) parallels that for determining priority of invention in an interference under 35 U.S.C.S. § 102(g), it does not follow that 37 C.F.R. § 1.131 practice is controlled by interference law. To the contrary, the parallel to interference practice found in Rule 131(b), should be recognized as one of convenience rather than of necessity. Thus, the conception and reduction to practice which must be established under the rule need not be the same as what is required in the interference sense of those terms.

Patent Law > Date of Invention & Priority > General Overview***Patent Law > Jurisdiction & Review > Subject Matter Jurisdiction > Appeals***

[HN5] See 37 C.F.R. § 1.131.

Patent Law > Date of Invention & Priority > Antedating Prior Art References***Patent Law > Jurisdiction & Review > Subject Matter Jurisdiction > Appeals***

[HN6] In the context of 37 C.F.R. § 1.131 a reference is nothing more than a patent or publication cited to show that all or part of the invention for which a patent is sought was in the prior art, either more than a year before the filing date to which the applicant is entitled, in which case it is a statutory bar and cannot be sworn back of, or before the applicant's date of invention.

Patent Law > Jurisdiction & Review > Subject Matter Jurisdiction > Appeals***Patent Law > Nonobviousness > Elements & Tests > Claimed Invention as a Whole***

[HN7] When the rejection is based on 35 U.S.C.S. § 103, the purpose of an affidavit is to establish that the claimed invention was made by the applicant before the effective date of a reference relied upon to show that the invention was obvious, and the applicant may prove, by eliminating a reference, that at the time the invention was made, the subject matter as a whole would not have been obvious.

Patent Law > Date of Invention & Priority > Antedating Prior Art References***Patent Law > Jurisdiction & Review > Subject Matter Jurisdiction > Appeals******Patent Law > U.S. Patent & Trademark Office Proceedings > Interferences > Patentability & Priority Determinations***

[HN8] 37 C.F.R. § 1.131 states that an affidavit can be used to antedate a United States patent reference which substantially shows or describes but does not claim the rejected invention.

Patent Law > Anticipation & Novelty > Elements***Patent Law > Date of Invention & Priority > Abandonment, Concealment & Resumption of Activity******Patent Law > U.S. Patent & Trademark Office Proceedings > Examinations > General Overview***

[HN9] Although the statutory bar to use of a 37 C.F.R. § 1.131 affidavit, where the reference claims the rejected invention, is based on 35 U.S.C.S. § 102(g), this does not make the claims of the reference "prior art" for purposes of that section. A § 102(g) rejection is based on a showing that before the applicant's date of invention, the invention was made in the United States by another who had not abandoned, suppressed, or concealed it.

Patent Law > Jurisdiction & Review > Subject Matter Jurisdiction > Appeals***Patent Law > U.S. Patent & Trademark Office Proceedings > Examinations > General Overview******Patent Law > U.S. Patent & Trademark Office Proceedings > Interferences > General Overview***

[HN10] Although 37 C.F.R. § 1.201(b), states that an interference will be declared between applications and/or unexpired patents which contain claims for substantially the same invention, administrative practice requires discretion by examiners and the Patent and Trademark Commissioner in determining whether an interference should be declared. That determination is based on their interpretation of whether the applications and/or patents involved claim substantially the same invention. If such claims are identical and are fully supported and allowable, they generally will be put in interference.

Patent Law > Jurisdiction & Review > Subject Matter Jurisdiction > Appeals***Patent Law > U.S. Patent & Trademark Office Proceedings > Interferences > General Overview***

[HN11] An interference may be declared when the applications and/or patents claim variations of the same invention. In such a case, the U.S. Patent and Trademark Office may use phantom or modified counts as the basis for an interference.

Patent Law > Claims & Specifications > Description Requirement > General Overview
Patent Law > Jurisdiction & Review > Subject Matter Jurisdiction > Appeals

Patent Law > U.S. Patent & Trademark Office Proceedings > Reissues > General Overview

[HN12] To satisfy the description requirement of 35 U.S.C.S. § 112, an application must contain sufficient disclosure, expressly or inherently, to make it clear to one skilled in the art that the appellant was in possession of the subject matter claimed. A statement of appellant's invention in his specification, which is as broad as appellant's broadest claims, is sufficient to meet this requirement.

COUNSEL:

Warren N. Williams, John M. Collins, Kansas City, Mo. (Schmidt, Johnson, Hovey & Williams, Kansas City, Mo.), attorneys of record, for appellant.

Joseph F. Nakamura, Washington, D. C., for Commissioner of Patents, Fred W. Sherling, Washington, D. C., of counsel.

JUDGES:

Before MARKEY, Chief Judge, RICH, BALDWIN and MILLER, Associate Judges, and COWEN, n* Senior Judge.

* The Honorable Wilson Cowen, United States Court of Claims, sitting by designation.

OPINIONBY:

MILLER

OPINION:

[*975]

This is an appeal from the decision of the Patent and Trademark Office ("PTO") Board of Appeals ("board"), rejecting claims 28, 31, 34-37, and 40. n1 We reverse.

n1. Application serial No. 124,413 for "Method and Compositions for Removing Acid Gases from Gaseous Mixtures" was filed March 15, 1971, and is related through a divisional and a series of continuation-in-part applications to application serial No. 209,221, filed July 11, 1962.

BACKGROUND

The Invention

Appellant's invention relates [**2] to a high temperature, catalyzed, absorption-desorption process for selectively removing acid gases (E. g., carbon dioxide and hydrogen sulfide) from gaseous mixtures, as in the purification of natural gas and hydrogen streams employed for making ammonia. The absorption solution, which includes a potassium salt (E. g., potassium carbonate) and a minor amount of an amine catalyst (E. g., an alkanolamine or ethylene polyamine), is contacted at elevated temperatures with the gas stream to be purified. The solution absorbs the objectionable acid gases and is then regenerated, for recycling in the continuous process, by steam stripping the acid gases from the absorption solution. Appellant allegedly discovered that use of the defined amines in conjunction with a carbonate absorption solution at elevated temperatures is precisely contrary to the predicted results n2 in that a highly catalyzed acid gas absorption solution results. Appellant's claims require "an elevated temperature of at least 560 C." during the absorption process. Claims 28 and 34 are typical:

n2. In his brief, appellant summarizes the teachings of the prior art as follows:

(I)t was confidently predicted by those skilled in the art that the addition of minor amounts of the defined amines to a hot carbonate system would have had the effect of increasing the equilibrium back pressure of CO 2 within a gas stream to be purified, and that this would make absorption of CO 2 to residual levels extremely difficult. The prediction of increased equilibrium back pressure in the absorption solution stems from the known fact that both hot alkanolamine solutions and hot potassium carbonate solutions individually have relatively high equilibrium CO 2 back pressures, and that to combine two solution components having this characteristic should therefore yield a combined solution having an unacceptably high equilibrium CO 2 back pressure. This, of course, would predictably limit CO 2 absorption to an unacceptably low level.

[**3]

28. An absorption-desorption process for removing acid gases such as CO 2 or H 2S from gaseous mixture containing such acid gases, comprising the step of:

contacting said gaseous mixture with a hot aqueous solution comprising from about 15 to 40% By weight of a potassium salt selected from the group consisting of potassium carbonate, potassium borate and mixtures

thereof and a minor amount of an amine selected from the group consisting of the alkanolamines and the ethylene polyamines in an absorption stage to thereby catalyze the absorption of said acid gases from said gaseous mixtures;

maintaining the aqueous solution at an elevated temperature of at least about 56o C. during contact with said gaseous mixture;

regenerating the hot aqueous solution containing said absorbed acid gas in a regeneration stage by steam stripping [*976] at least a portion of said acid gas therefrom; and

recycling at least a portion of said regenerated solution for further contact with said gaseous mixture while maintaining said solution at a temperature of at least 56o C.

34. The process of Claim 28 wherein said aqueous solution is contacted with said gaseous mixture in a two-stage absorber. [**4]

The Prior Art

The examiner relied upon Mayland n3 for its disclosure of the use of specified amines (monoethanolamine, diethanolamine, and mixtures thereof) to catalyze a carbonate absorption process for removing carbon dioxide from gaseous mixtures. Regarding the operating temperature of the process, the Mayland specification states:

n3. U.S. patent No. 3,144,301 to Bertrand J. Mayland for "Removal of Carbon Dioxide From Gaseous Mixtures," issued August 11, 1964, on application filed April 21, 1961.

The rate of absorption and desorption of CO 2 in carbonate solutions is relatively slow. At ambient temperatures equipment so large as to be non-commercial would be required to provide sufficient time of contact. Operating at elevated temperatures in the 220o to 240o F. (104o -116o C) range (which is generally about the boiling point of the carbonate absorption solution in the regenerator), the rates are improved considerably but the equipment is still somewhat large for a given service compared to other competitive [**5] processes.

Nevertheless, none of the Mayland Claims recites any qualitative or quantitative temperature limitation, the significance of which will later appear. Claim 1 is illustrative:

1. In a regenerative process for purifying gaseous mixtures by removing carbon dioxide therefrom, in which process the gaseous mixtures are brought into in-

timate contact with a solution of potassium carbonate whereby carbon dioxide is absorbed from said gaseous mixtures with the consequent conversion of potassium carbonate to potassium bicarbonate, the concentration of the said solution being equivalent to that of a water solution containing substantially 18% To substantially 40% Of potassium carbonate, the step of maintaining in the solution a content of substantially 0.5% To 2% Of an amine chosen from a group consisting of monoethanolamine and diethanolamine and mixtures thereof, whereby to increase the efficiency of the process.

Acting pursuant to 37 CFR 1.196(b), the board relied upon two further references: a British patent n4 and a U. S. patent to Benson. n5 The British patent discloses a carbonate absorption process, which is catalyzed by ethanolamine, for removing carbon dioxide from [**6] gas mixtures and is similar to the process disclosed in Mayland. Benson was cited for its teaching of a split-stream technique in an analogous gas purification process.

n4. British patent specification No. 1,084,526 to Homer E. Benson, Joseph H. Field, and William M. Epes for "Improvements in or relating to Gas Purification," published September 27, 1967.

n5. U. S. patent No. 2,886,405 to Homer E. Benson and Joseph H. Field for "Method for Separating CO 2 and H 2S from Gas Mixtures," issued May 12, 1959, on application filed February 24, 1956.

Proceedings Below

Concurrent with the filing of the application on appeal, appellant filed a notice under 37 CFR 1.205(b) with a supporting explanation and affidavits in order to provoke an interference with Mayland. n6 In the first [*977] office action, the examiner refused to institute an interference, stating:

n6. Claims 26 and 27, the copied claims of Mayland as modified by appellant, read as follows:

26. In a regenerative process for purifying gaseous mixtures by removing carbon dioxide therefrom, in which process the gaseous mixtures are brought into intimate contact with a solution of potassium carbonate whereby carbon dioxide is absorbed from said gaseous mixtures with the consequent conversion of potassium carbonate to potassium bicarbonate, the concentration of the

said solution being equivalent to that of a water solution containing substantially 15% To substantially 40% Of potassium carbonate, the step of maintaining in the solution a content of substantially 0.9% To 7.7% Of an amine chosen from a group consisting of monoethanolamine and diethanolamine and mixtures thereof, whereby to increase the efficiency of the process.

27. The process of claim 26 wherein said amine content is maintained such that the atomic ratio of potassium to amino nitrogen is within the range of 2:1 to 100:1.

[**7]

The limitation of 18-40% In the patent claim is not deemed an immaterial limitation. It is the broadest range disclosed in the patent specification. No basis is found in applicant's disclosure for the claimed amine concentration in a potassium carbonate solution. The affidavit showing of 2.3% Amine in a 14.7% Solution does not antedate the Mayland patent and no basis is perceived for institution of interference proceedings.

Thereafter, appellant amended his claims in response to numerous prior art rejections made by the examiner and submitted an affidavit under 37 CFR 1.131 (hereinafter "131 affidavit") to antedate the filing date of Mayland.

In the next office action, the examiner declared that the 131 affidavit of applicant "has been considered but may not be utilized to antedate the patent to Mayland as both applicant and Mayland are claiming substantially the same invention." The examiner did not contest the sufficiency of the 131 affidavit showing only the applicability of the affidavit. During subsequent office actions, all rejections were withdrawn except that claims 28, 31, 34-37, and 40 were rejected as anticipated by Mayland under 35 U.S.C. § 102. The examiner [**8] adhered to his previous position, saying:

The claims of Mayland are of the Jepson type, however, and refer to a regenerative process of removing carbon dioxide from gases utilizing a carbon solution wherein the improvement is the maintaining (of, Sic) the carbonate solution (with, Sic) a specified amount of an amine. It is apparent that the process recited in the claims must operate at some temperature and recourse to the specification indicates that a regenerative process to which the claimed improvement is directed is operated at a temperature of 220-240o F, which embraces applicant's claimed temperature of "at least 56o C" (132o F).

He also said that because Mayland and applicant are claiming the same invention "the rejection can not (Sic)

be overcome by a Rule 131 Affidavit but only through interference proceedings."

The Board's Decision

The board interpreted the rejection before it as follows:

The examiner's rejection is based on 35 U.S.C. § 102(g); and, inasmuch as appellant has antedated the reference by an affidavit under 37 CFR 1.131 to the apparent satisfaction of the examiner, the examiner relies only on the patent claims as prior art.

The board agreed [**9] with the examiner's position regarding claims 28, 31, and 40, thus:

Even though only the claims of Mayland are prior art, they cannot be read in a vacuum. To give meaning to and determine the scope of the preamble of Mayland's Jepson type claims, it is necessary to look at the patent specification. In this case it is clear that appellant has merely recited the specific limitations of that part of the Mayland process which are intended to be encompassed by the preamble of the Jepson claims. That is to say, the Mayland claims are clearly drawn to a process which is carried out at the elevated temperatures recited in appellant's claims.

The board disagreed with the examiner on the other claims on the basis that Mayland does not disclose the "splitstream" technique of absorption and regeneration.

Pursuant to 37 C.F.R. 1.196(b), the board made several new rejections all based upon its conclusion of lack of support, in the specification as filed and in the parent applications, for the limitation that the absorption process be carried out "at an elevated temperature of at least about 56o C." [**978] All claims on appeal were rejected under 35 U.S.C. § § 132 and 112, first paragraph, [**10] as drawn to new matter or an invention that is not fully described in the specification as filed. The board reasoned:

The temperature of 56o C is disclosed at page 8 of the specification merely as one temperature at which reaction kinetics of CO 2 absorption were measured. It is questionable whether in any event this disclosure would support the limitation "at least about 56o C." In this case, since the 56o C reactions concerned not the amines Per se, but amine borates, this disclosure does not relate to the invention of the claims before us.

The board further rejected claims 28, 31, and 40 under 35 U.S.C. § 102(b) for anticipation by either Mayland or the British patent, finding the limitation ("at least about 56o C.") to be unsupported by the disclosure of the parent applications. It declared that Mayland and the British patents were statutory bars, which cannot be

sworn behind by a 131 affidavit, and that, in addition to the British patent, the entire specification of Mayland is available as prior art. Claims 34-37 were rejected under 35 U.S.C. § 103 based on the disclosure of either Mayland or the British patent, taken together with Benson, which discloses the split-stream [**11] technique "with a similar process except for the absence of the amine catalyst."

OPINION

[HN1] The purpose of filing a 131 affidavit n7 is to overcome the effective date of a reference n8 cited in support of a rejection. [HN2] If the 131 affidavit demonstrates that the applicant's date of invention is earlier than the effective date of the reference, the reference is eliminated as support for the rejection. n9 [HN3] The purpose of filing a 131 affidavit is Not to demonstrate prior invention Per se, but merely to antedate the effective date of the reference. See *In re Moore*, 444 F.2d 572, 58 CCPA 1340, 170 USPQ 260 (1971). [HN4] Although the test for sufficiency of an affidavit under Rule 131(b) parallels that for determining priority of invention in an interference under 35 U.S.C. § 102(g), it does not follow that Rule 131 practice is [**979] controlled by interference law. n10 To the contrary, "(t)he parallel to interference practice found in Rule 131(b) should be recognized as one of convenience rather than of necessity." 444 F.2d at 580, 58 CCPA at 1353, 170 USPQ at 267. Thus, "the 'conception' and 'reduction to practice' which must be established under the rule need not be the same as what is [**12] required in the 'interference' sense of those terms." Id.; accord, *In re Borkowski*, 505 F.2d 713, 718-19, 184 USPQ 29, 33 (Cust. & Pat.App.1974).

n7. [HN5] 37 CFR 1.131 ("Rule 131") provides:

s 1.131 Affidavit or declaration of prior invention to overcome cited patent or publication.

(a) When any claim of an application is rejected on reference to a domestic patent which substantially shows or describes but does not claim the rejected invention, or on reference to a foreign patent or to a printed publication, and the applicant shall make oath or declaration as to facts showing a completion of the invention in this country before the filing date of the application in which the domestic patent issued, or before the date of the foreign patent, or before the date of the printed publication, then the patent or publication cited shall not bar the grant of a patent to the applicant, unless the date of such patent or printed publication be more than one year prior

to the date on which the application was filed in this country.

(b) The showing of facts shall be such, in character and weight, as to establish reduction to practice prior to the effective date of the reference, or conception of the invention prior to the effective date of the reference coupled with due diligence from said date to a subsequent reduction to practice or to the filing of the application. Original exhibits of drawings or records, or photocopies thereof, must accompany and form part of the affidavit or declaration or their absence satisfactorily explained.

[**13]

n8. [HN6] In the context of Rule 131, a reference "is nothing more than a patent or publication cited to show that all or part of the invention for which a patent is sought was in the prior art, either more than a year before the filing date to which the applicant is entitled, in which case it is a 'statutory bar' and cannot be sworn back of, or before the applicant's date of invention." *In re Stempel*, 241 F.2d 755, 760, 44 CCPA 820, 826, 113 USPQ 77, 81 (1957).

n9. This is true whether the rejection is based on section 102 or section 103; the only difference is that [HN7] when the rejection is based on section 103, "the purpose of an affidavit is to establish that the claimed invention was made by the applicant before the effective date of a reference relied upon to show that the invention was obvious," and "the applicant may prove, by eliminating a reference, that at the time the invention was made 'the subject matter as a whole would (not) have been obvious * * *.'" *In re Tanczyn*, 347 F.2d 830, 832, 52 CCPA 1630, 1632-33, 146 USPQ 298, 300 (1965).

n10. See Walterscheid, Rule 131 Practice, 57 J.Pat.Off.Soc'y 336 (1975).

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[HN8] Rule 131 states that an affidavit can be used to antedate a U. S. patent reference "which substantially shows or describes but does not claim the rejected invention." The reason for not permitting such an affidavit where the U. S. patent reference claims the invention of rejected claims of an application is to compel the use of an interference to determine priority of invention. n11 Because 131 affidavit practice is designed to aid inventors in the protection of their statutory rights (*In re Stempel*, *supra*, note 8), we conclude that the phrase

"does not claim the rejected invention" should be construed favorably to an applicant, if possible, so that unless the applicant is clearly claiming the same invention as the U. S. patent reference, he will not lose his rights under Rule 131. (As pointed out *Infra*, the PTO can still declare an interference notwithstanding the filing of a 131 affidavit.)

n11. As quoted above, the board characterized the examiner's rejection as based on 35 U.S.C. § 102(g) and apparently considered Mayland's claims to be prior art under that section. [HN9] Although the statutory bar to use of a 131 affidavit, where the reference claims the rejected invention, is based on section 102(g), this does not make the claims of the reference "prior art" for purposes of that section. A section 102(g) rejection is based on a showing that "before the applicant's (date of) invention . . . the invention was made in this country by another (Mayland) who had not abandoned, suppressed, or concealed it." (The first occurrence of the word "invention" does not refer to the Subject matter of the claimed invention, but rather the Event of invention the act of producing or coming into possession of the subject matter being claimed. See Janicke, "The Varied Meanings of 'Invention' in Patent Practice," 4 Patent Law Perspective (Appendix 1 1970); Cf. *In re Moore*, 444 F.2d at 578, 58 CCPA at 1350, 170 USPQ at 266.)

To the extent that the PTO is attempting to rely upon an effective date of "prior invention" of Mayland before the filing date of the Mayland application, which is the effective date of Mayland under 35 U.S.C. § 102(e), we are not persuaded that the PTO has met its burden of establishing a prima facie case of Prior invention under section 102(g). We have found nothing in the contents of the reference, the application on appeal, the statements in affidavits or declarations filed (including those under Rule 131), or the attorney's arguments during prosecution that establishes an earlier effective date.

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[HN10] Although 37 CFR 1.201(b) states that an "interference Will be declared" (emphasis added) between applications and/or unexpired patents which "contain claims for substantially the same invention," understandably, administrative practice requires discretion by examiners and the Commissioner in determining whether an interference should be declared. That determination is based on their interpretation of whether the applications

and/or patents involved claim "substantially the same invention." If such claims are identical and are fully supported and allowable, they generally will be put in interference. But see 37 CFR 1.201(c). [HN11] An interference may also be declared when the applications and/or patents claim variations of the same invention. In such a case, the PTO may use phantom or modified counts as the basis for an interference. See 37 CFR 1.203(b); Cf. *Squires v. Corbett*, 560 F.2d 424, 194 USPQ 513 (Cust. & Pat.App.1977).

If it is determined that an applicant cannot use a 131 affidavit to antedate the effective date of a U. S. patent reference because it claims the subject matter of the rejected claim, there should be no question that his application and the reference application [**16] or patent "contain claims for substantially the same invention" and, thus, meet the test for instituting an interference. However, because the requirements of Rule 131 practice and interference practice are not the same, there may be occasions when the PTO determines that a 131 [*980] affidavit can be used to antedate the effective date of a reference in order to overcome a rejection, but also determines that the involved application should be placed in interference with that reference. Such a seemingly anomalous result can be justified because: (1) the use of a 131 affidavit does not establish prior invention *Per se*, and (2) the determinations ("claims the rejected invention" vs. "claims for substantially the same invention") are not coextensive. At the same time, we do not regard the opposite result (proposed here by the PTO) to be justifiable, namely: leaving an applicant in a position where he cannot overcome a reference by a 131 affidavit because the PTO has decided that the reference claims his invention, while, at the same time, he is denied an interference because the PTO has decided that the claims of his application and those of the reference are not for substantially [**17] the same invention.

In the case before us, appellant argues that the Mayland reference "does not claim the rejected invention" of his appealed claims because Mayland's claims do not contain any temperature limitation; whereas his claims require the operation of the absorption process "at an elevated temperature of at least about 560 C." Although the board recognized that Mayland's claims do not contain any temperature limitation, it concluded, as related above, that such a limitation can be read into the Mayland claims in order to "give meaning to and determine the scope of the preamble of Mayland's Jepson type claims." We would agree that Mayland Discloses a temperature for the operation of a hot carbonate absorption system (104o -116o C), which is within appellant's claimed range ("at least 56o C."); nevertheless, Mayland did not Claim a specific temperature range. Therefore, in light of our conclusion that the phrase "does not claim

the rejected invention" should be construed favorably to an applicant, we are unwilling to read this additional limitation into the claims of the prior art reference.

This position is consistent with *In re Sutherland*, 347 F.2d 1009, 52 CCPA 1683, [**18] 146 USPQ 485 (1965), wherein this court, in reviewing a rejection for double patenting and, thus, determining whether Sutherland's (appellant's) application and a patent to Carpenter were claiming the same invention, concluded that the board acted improperly in reading matter disclosed in the specification into the Carpenter claims. Carpenter's specification Disclosed the "surprising discovery that a latex Blend prepared from frozen and thawed agglomerated synthetic rubber latex having a relatively large average particle size and synthetic rubber latex having a relatively small average particle size exhibited enhanced mechanical stability characteristics." 347 F.2d at 1010, 52 CCPA at 1686, 146 USPQ at 486. Carpenter Claimed the freezing and blend characteristics. "Sutherland's invention was based on a discovery with respect to the Temperature used in freezing the latex in the old freeze-thaw agglomeration process." 347 F.2d at 1011, 52 CCPA at 1686, 146 USPQ at 487. He Claimed "subcooling the frozen latex to a temperature between about -10o F. and -40o F." The board held that Carpenter and Sutherland were claiming the same invention, saying (347 F.2d at 1014, 52 CCPA at 1690, 146 [**19] USPQ at 489):

While the claims of Carpenter do not specify the temperature of freezing, the Disclosure of Carpenter shows such temperatures within the range appellant states as critical. It is considered proper to look to the patent specification to determine the Scope of the term "freezing" in the patent claims (citation omitted)

In criticizing the board's use of the Carpenter specification to determine the scope of his claims, this court said that the " 'scope' of the term 'freezing' in Carpenter's claims is not what we are concerned with but rather, What invention his claims Define." 347 F.2d at 1014, 52 CCPA at 1690-91, 146 USPQ at 489. n12 Similarly, we conclude that [*981] Mayland's claims do not define an invention including a temperature limitation. Cf. *In re Clark*, 457 F.2d 1004, 59 CCPA 924, 173 USPQ 359 (1972); *In re Hidy*, 303 F.2d 954, 49 CCPA 1152, 133 USPQ 650 (1962).

n12. The court went even further than we need to go in the present case. The Carpenter claim used the term "freezing," which is itself somewhat of a temperature limitation that might be further defined by reference to the specification. There is no temperature limitation whatsoever in Mayland, neither a broad nor a specific

term being used. Like Mayland, the Carpenter process had to be operated at some temperature (which was not only disclosed in the specification but also suggested by the term "freezing" in the claims); nevertheless, the court was unwilling to read that limitation into the claims.

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Accordingly, we hold that the effective date of the Mayland reference is antedated by appellant's 131 affidavit.

The rejection of claims 28, 31, and 40 under 35 U.S.C. § 102(g) is reversed.

With respect to the other rejections, the dispositive issue is whether there is support (satisfying the description requirement of section 112, first paragraph) in appellant's specification And in the parent applications for the claimed temperature limitation of "at least about 56o C." n13 As we read the board's opinion, there are two bases for its rejections: (1) that appellant has not disclosed any minimum temperature for the operation of the process, that is, he has not shown that 56o C is a minimum or critical lower limit for the operation of the process; and (2) that the reaction tests conducted at 56o C did not relate to amines in the generic sense but, instead, to amine borates. n14

n13. If there is such support, the rejection under section 112, first paragraph falls; also, since such a rejection is tantamount to a new matter rejection under 35 U.S.C. § 132, that rejection must also fall. *In re Bowen*, 492 F.2d 859, 181 USPQ 48 (Cust. & Pat.App.1974). Moreover, if there is similar support in each of the parent applications on which appellant relies in his chain of priority, appellant is entitled to the filing date of his original parent application, thereby eliminating Mayland and the British patent as references for the rejections under sections 102(b) and 103.

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n14. Because it was well known in the prior art that the process could be operated at temperatures greater than 80o C, appellant is claiming a process achieving the stated results at temperatures as high as known in the prior art. See *In re Goffe*, 542 F.2d 564, 191 USPQ 429 (Cust. & Pat.App.1976); *In re Geerdes*, 491 F.2d 1260, 1265, 180 USPQ 789, 793 (Cust. & Pat.App.1974).

Regarding the first basis, the PTO has cited no precedent for requiring appellant to demonstrate that his process will not operate below 56o C. [HN12] To satisfy the description requirement of section 112, first paragraph, an application must contain sufficient disclosure, expressly or inherently, to make it clear to one skilled in the art that the appellant was in possession of the subject matter claimed. *In re Mott*, 539 F.2d 1291, 190 USPQ 536 (Cust. & Pat.App.1976); *In re Smythe*, 480 F.2d 1376, 178 USPQ 279 (Cust. & Pat.App.1973). "(A) statement of appellant's invention (in his specification) which is as broad as appellant's broadest claims" is sufficient to meet this requirement. *In re Robbins*, 429 F.2d 452, 456, 57 CCPA [**22] 1321, 1325-26, 166 USPQ 552, 555 (1970). Appellant's specification indicates that hot potassium carbonate solutions are known in the prior art and contains replicate tests of the operation of his process at 56o C. Thus, that appellant considered his hot system to operate "at an elevated temperature of at least about 56o C." would have been clear to one skilled in the art from the replicate tests at 56o and 80o C and the teachings of the prior art that such systems were known to operate at temperatures above 80o C. Although appellant may be entitled to claim a range of temperatures below 56o C, he need not claim all that he is entitled to claim and need have support only for what he does claim. We are not persuaded that there is any require-

ment for appellant to demonstrate the Criticality of a lower limit to meet the description requirement. And a review of the parent applications indicates that language corresponding to that in appellant's specification was also present in all of the parent applications relied upon for applicant's chain of priority.

Regarding the second basis, suffice it to say that the specification in several places equates amines and their borates as operable [**23] catalysts. Reading the specification as a whole, we agree with appellant's argument [982] that the "only 'necessary and reasonable construction' would be that, inasmuch as the amines and amine borates are described as being equivalent for purposes of the invention as claimed, the characterizing temperatures given in the . . . amine borate examples are necessarily applicable to the amines as generically claimed." Again, corresponding disclosures are found in the parent applications.

In view of the foregoing, we hold that the limitation "at an elevated temperature of at least about 56o C." is fully described in appellant's specification and in the parent applications.

The rejections under sections 102(b), 103, 112, and 132 of claims 28, 31, 34-37, and 40 are Reversed.

REVERSED